

**Create cost-effective, revenue generating  
solutions with Aculab's SS7 products  
Product deployment note**

## The Aculab solution

### The SS7 market position

Signalling system number 7 (SS7) is a standardised architecture and protocol set through which inter-office telephone networks and service nodes exchange information to achieve wired and wireless call-establishment, billing, routing, and control functions. SIGTRAN comprises a complementary suite of protocols for the transport of SS7 messages over IP networks.

Despite the rise of fourth generation, IP-based networks it is still the case that SS7 continues to control the PSTN backbone and is essential for many mobile services, such as roaming and the short message service (SMS). Importantly, carriers, service providers and platform vendors realise that SS7 will remain in widespread use for a considerable time to come. A full conversion to SIP and IMS, involving a total rewrite or replacement of all applications and infrastructures that use SS7, will undoubtedly take a very long time.

### Solutions based on SS7 technologies

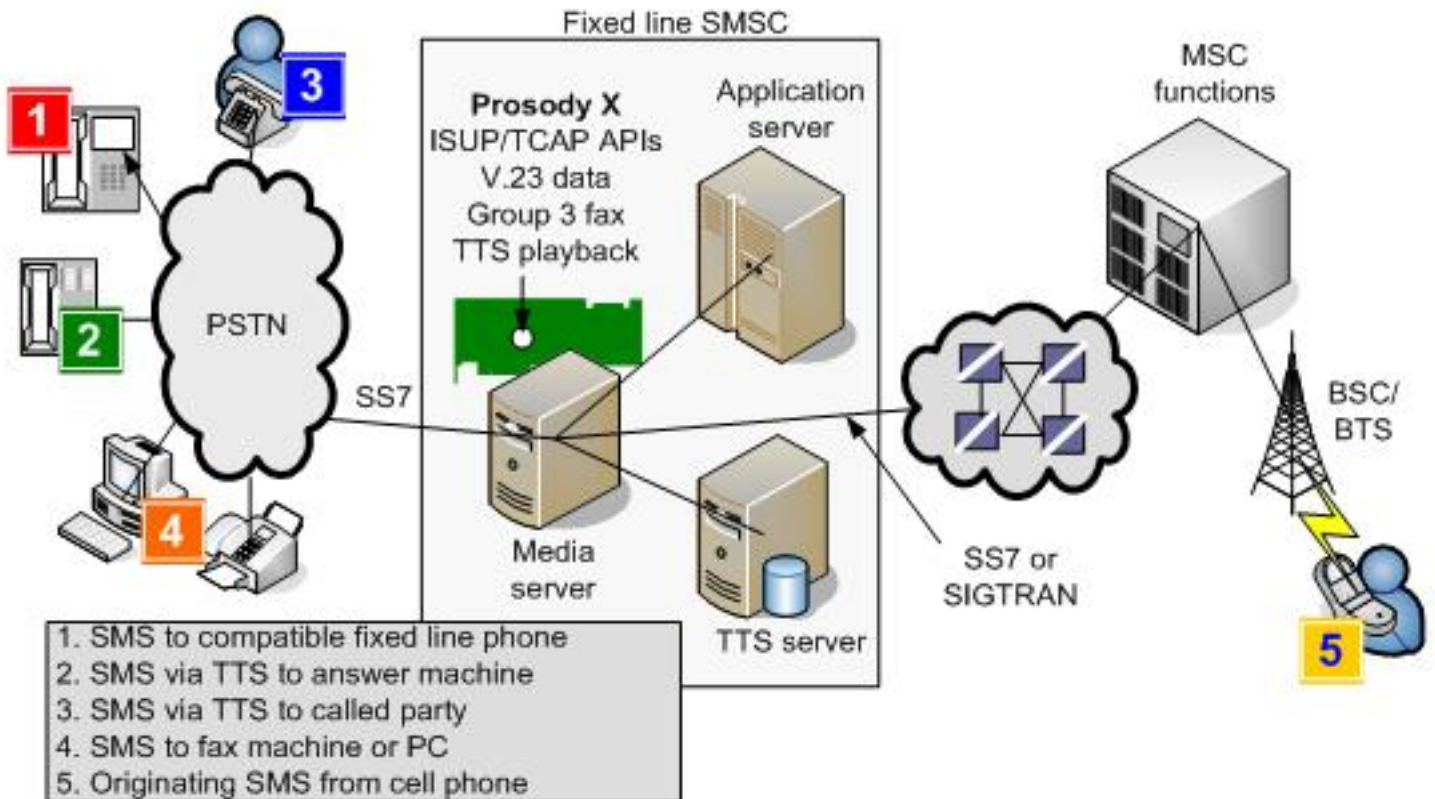
SS7 intelligent network (IN) services that we take for granted today, such as 0800/1800 Freephone numbers, calling line identification (CLI/ANI), short message service (SMS), mobile roaming, tele-voting, prepaid calling and network-based voicemail, are all enabled by SS7 and SIGTRAN. These and many other revenue generating content services, such as caller ring back tones (CRBT) can be cost-effectively delivered using Aculab's SS7 technology.

### Aculab's SS7 products

With Aculab's ultra-reliable, deployment proven boards and SS7 (C7) and/or SIGTRAN software, users can readily construct a cost-effective, dual redundant signalling architecture with distributed application or subsystem nodes for both call and non-call related applications.

The range of applications and platforms that can be created is extensive; as is the deployment of Aculab's SS7 signalling software, which is in use throughout more than 40 countries across 5 continents. Service delivery platforms, SMS applications, CRBT services, fixed and mobile prepaid solutions, and unstructured supplementary service data (USSD) platforms reflect some of the foremost uses of Aculab's SS7 boards and software.

Many applications also require media processing functionality, an example of which is illustrated in the diagram. The media server is based on Prosody X, which can provide all the functionality needed for a fixed line short message service centre (SMSC) platform. You too can base your success on Aculab's technology, getting all you need with a single board.



### More solutions

If you are a carrier or a service provider looking for an SS7 or service delivery platform, find out from our [showcase section](#) which of our innovative customers are offering SS7 solutions.

Visit the [case studies](#) page to see how some of our customers have used Aculab products to develop SS7 solutions.

### Professional services

Aculab's holistic approach to support also embraces consultancy, which is available to help you with your solution development. If you need help with IN application parts, such as CAMEL, talk to our [professional services](#) team. Fundamentally, we look to provide you with the right mix of product and support capabilities to help you be successful in bringing your products to market.

**Key features**

Aculab's technology, including its Prosody portfolio of media processing boards and software, supports all of the essential functionality needed for SS7 solutions:

<b>SS7 requirement</b>	<b>Aculab's SS7 and SIGTRAN functionality</b>
Dual redundant signalling configuration	Telco grade, dual redundant MTP3/M3UA with: <ul style="list-style-type: none"> <li>• Dual chassis active:active redundancy</li> <li>• Link and route protection</li> <li>• Automatic failover - no application intervention needed</li> <li>• Message load sharing/balancing</li> <li>• Configurable traffic routing</li> </ul>
Scalability	Distributed ISUP call processing and TCAP message handling enables: <ul style="list-style-type: none"> <li>• Remote application server(s)</li> <li>• Multiple (unrestricted) ISUP/TCAP hosts</li> <li>• Multiple, distributed applications subsystems</li> <li>• Independent hosts (added resilience)</li> <li>• Call/message load sharing</li> <li>• Unrestricted number of B-channels</li> <li>• Extreme scalability</li> </ul>
Ease of use (installation, configuration and operation)	Usability features: <ul style="list-style-type: none"> <li>• API access to message parameters for 'power users'</li> <li>• API control of signalling links and B-channels</li> <li>• Same APIs regardless of underlying transport method (TDM or IP)</li> </ul>
Multi-faceted, cost-effective technology	CAPEX/OPEX benefits include: <ul style="list-style-type: none"> <li>• Single card option (combined media processing functionality)</li> <li>• Build distributed, lower cost systems (compared to single, large, expensive server)</li> <li>• Cost free licence improves margins</li> <li>• Faster time to market (and investment protection) from consistent APIs</li> </ul>

High performance	High traffic capacity: <ul style="list-style-type: none"><li>• Near 100% link utilisation (at or near 1 Erlang for message sizes of 128 octets or more)</li><li>• Up to 128 signalling links per board</li></ul>
Worldwide deployment	Aculab's SS7 software has been deployed in more than 40 countries across 5 continents: <ul style="list-style-type: none"><li>• Built-in support for ITU-T, ANSI, China, ETSI and UK variants</li><li>• Readily user customisable for other variants</li></ul>

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